



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------------|------------------|
| 10/664,445 | 09/17/2003 | Harunobu Kusumoto | 01043-1001 | 4530 |
| 7590 10/14/2005 | | | | |
| DITTHAVONG & CARLSON, P.C. Suite A 10507 Braddock Road Fairfax, VA 22032 | | | EXAMINER HUNTER, ALVIN A | |
| | | | ART UNIT 3711 | PAPER NUMBER |

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,445

Applicant(s)

KUSUMOTO ET AL.

Examiner

Alvin A. Hunter

Art Unit

3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/17/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

The indicated allowability of claim 6 is withdrawn in view of the newly discovered reference(s) to Helmstetter et al. (USPN 6565452). Rejections based on the newly cited reference(s) follow.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plate-like face body extending the entire width of the head body in the vertical direction, as set forth in claim 7, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

Art Unit: 3711

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Claim 1, 2, 4, 5, 7, 8, 11-15, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. (USPN 6179726) in view of Anderson et al. (USPN 5255918) and Helmstetter et al. (USPN 6565452).

Regarding claim 1, Satoh et al. discloses an iron head for a golf club including a head body and a plate like body attached to the head body wherein the plate-like body face has a first through four peripheries arranged adjacent to the toe, heel, top, and sole portions of the head body respectively comprises a means for defining a cavity portion between the plate-like face body and a back part of the head body wherein the cavity portion being defined so as to extend in the head body from a first position adjacent to the toe portion to a second position adjacent to a heel end of the head body; the second position being remote from the secondary periphery in a direction toward the heel end of the head body; and the head body having a receipt portion provided for receiving a rear face portion of the plate-like face body adjacent to the second periphery wherein the

Art Unit: 3711

receipt portion has a length (See Figures 8-13). Satoh et al. does not disclose the material used to make the club head or the length of the receipt portions. Anderson et al. discloses an iron club head wherein the head body is made of metal and a plate-like portion made of a metal different from the head body (See Column 2, lines 25 through 40). Anderson et al. also notes that the face and the body may be welded together.

One having ordinary skill in art would have found it obvious to have the club head made of two different metals, ^{as taught by Anderson et al. &c} in order to improve the strength of the club head. Helmstetter et al. discloses a club head having a head body and a plate-like face body wherein a plurality of tabs 47 constitute the receipt portion for receiving the plate-like face body (See Figure 7 and Column 8, lines 14 through 19). Clearly shown by Figure 7, the receipt portion has a length less than one fourth of the length of the periphery along the heel side of the club head. One having ordinary skill in the art would have found it obvious to have the receipt portion of Satoh et al. to have a length of less than a fourth of the second periphery, as taught by Helmstetter et al., in order to assisting in welding the plate-like face body to the club head.

Regarding claims 2, Limitation refers to how the plate is formed. The limitation "rolled" plate will not be giving any patentable weight being that the limitation is moreso directed to the process in which the plate has been made. Furthermore, Anderson et al. discloses that the forged plate-like body has high strength in which the applicant is trying to achieve with the plate being rolled. Anderson et al. achieves the same goal as that desired by the applicant by rolling, therefore, it is submitted that Anderson et al. meet the process in which the plate-like body is made (See MPEP 2113).

Regarding claim 4, Limitation refers to how the plate is formed. The limitation "using laser welding" will not be giving any patentable weight being that the limitation is moreso directed to the process in which the plate is attached to the head body. Furthermore, Anderson et al. discloses that the forged plate-like body is welded to the head body. Anderson et al. achieves the same goal as that desired by the applicant by laser beam, which is to attach the plate-like body to the heady body; therefore, it is submitted that Anderson et al. meet the process in which the plate-like body is attached (See MPEP 2113).

Regarding claim 5, Satoh et al. inherently discloses the periphery of the plate-like face body on the heel side being located to be in no contact with a ball when the ball comes into contact with a specified portion of the club head. Wherein the portion extends between the surface of a face part and the surface of the heel part of the club head being that the golf ball is theoretically hit at the sweet spot of the club head which is at the center of the plate-like body.

Regarding claim 6, Helmstetter et al. discloses the cavity extending between a rear face of the plate-like body and a back part of the head body, wherein the shaft receipt portion is formed according to U.S. Patent 6352482, in which shows the hosel having a open top and bottom. Also Helmstetter et al. discloses that the hosel does not engage the bottom heel part of the club head, thereby, implying that the hosel is in fluid communication with the cavity. One having ordinary skill in the art would have found it obvious to have the hosel of the above construction, as taught by Helmstetter et al., in order to improve the compliance (flexing) of the plate-like face body.

Regarding claim 7, Applicant does not disclose why it is critical, in order attain the invention, for the plate-like face body to extend over the entire width of the head body vertically. Satoh et al., Anderson, et al., and Helmstetter et al. all disclose plate-like face body extending a distance across the width of the club head vertically. The combination all teach an area in which the ball is struck which is defined by the plate-like face body. One having ordinary skill in the art would have found the extension of the plate-like face body to be an obvious matter of design choice being that Satoh et al., Anderson, et al., and Helmstetter et al. would perform equally as well being that it creates an flexing area wherein the ball may be struck at.

Regarding claim 8, Satoh et al. and Anderson et al. both show the thickness of the heel part of the head body at its portion confronting an end face of the periphery of the plate-like face body being larger than that of the face (See Drawings).

Regarding claims 11, 19, and 20, Satoh et al. discloses an iron head for a golf club including a head body and a plate like body attached to the head body wherein the plate-like body face has a first through four peripheries arranged adjacent to the toe, heel, top, and sole portions of the head body respectively comprises a means for defining a cavity portion between the plate-like face body and a back part of the head body wherein the cavity portion being defined so as to extend in the head body from a first position adjacent to the toe portion to a second position adjacent to a heel end of the head body; the second position being remote from the secondary periphery in a direction toward the heel end of the head body; and the head body having a receipt portion provided for receiving a rear face portion of the plate-like face body adjacent to

Art Unit: 3711

the second periphery wherein the receipt portion has a length (See Figures 8-13).

Satoh et al. does not disclose the material used to make the club head or the length of the receipt portions. Anderson et al. discloses an iron club head wherein the head body is made of metal and a plate-like portion made of a metal different from the head body (See Column 2, lines 25 through 40). Anderson et al. also notes that the face and the body may be welded together. One having ordinary skill in art would have found it obvious to have the club head made of two different metals in order to improve the strength of the club head. Helmstetter et al. discloses a club head having a head body and a plate-like face body wherein a plurality of tabs 47 constitute the receipt portion for receiving the plate-like face body (See Figure 7 and Column 8, lines 14 through 19).

Clearly shown by Figure 7, the receipt portion has a length less than one fourth of the length of the periphery along the heel side of the club head. One having ordinary skill in the art would have found it obvious to have the receipt portion of Satoh et al. to have a length of less than a fourth of the second periphery, as taught by Helmstetter et al., in order to assisting in welding the plate-like face body to the club head. Helmstetter et al. discloses the cavity extending between a rear face of the plate-like body and a back part of the head body, wherein the shaft receipt portion is formed according to U.S.

Patent 6352482, in which shows the hosel having a open top and bottom. Also

Helmstetter et al. discloses that the hosel does not engage the bottom heel part of the club head, thereby, implying that the hosel is in fluid communication with the cavity.

One having ordinary skill in the art would have found it obvious to have the hosel of the

above construction, as taught by Helmstetter et al., in order to improve the compliance (flexing) of the plate-like face body.

Regarding claim 12, Limitation refers to how the plate is formed. The limitation "rolled" plate will not be giving any patentable weight being that the limitation is more so directed to the process in which the plate has been made. Furthermore, Anderson et al. discloses that the forged plate-like body has high strength in which the applicant is trying to achieve with the plate being rolled. Anderson et al. achieves the same goal as that desired by the applicant by rolling, therefore, it is submitted that Anderson et al. meet the process in which the plate-like body is made (See MPEP 2113).

Regarding claim 14, Limitation refers to how the plate is formed. The limitation "using laser welding" will not be giving any patentable weight being that the limitation is more so directed to the process in which the plate is attached to the head body. Furthermore, Anderson et al. discloses that the forged plate-like body is welded to the head body. Anderson et al. achieves the same goal as that desired by the applicant by laser beam, which is to attach the plate-like body to the head body; therefore, it is submitted that Anderson et al. meet the process in which the plate-like body is attached (See MPEP 2113).

Regarding claim 15, Satoh et al. inherently discloses the periphery of the plate-like face body on the heel side being located to be in no contact with a ball when the ball comes into contact with a specified portion of the club head. Wherein the portion extends between the surface of a face part and the surface of the heel part of the club

head being that the golf ball is theoretically hit at the sweet spot of the club head which is at the center of the plate-like body.

Regarding claim 16, Applicant does not disclose why it is critical, in order attain the invention, for the plate-like face body to extend over the entire width of the head body vertically. Satoh et al., Anderson, et al., and Helmstetter et al. all discloses plate-like face body extending a distance across the width of the club head vertically. The combination all teach an area in which the ball is struck which is defined by the plate-like face body. One having ordinary skill in the art would have found the extension of the plat-like face body to be an obvious matter of design choice being that Satoh et al., Anderson, et al., and Helmstetter et al. would perform equally as well being that it creates an flexing area wherein the ball may be struck at.

Regarding claim 17, Satoh et al. and Anderson et al. both show the thickness of the heel part of the head body at its portion confronting an end face of the periphery of the plate-like face body being larger than that of the face (See Drawings).

Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. (USPN 6179726) in view of Anderson et al. (USPN 5255918) and Helmstetter et al. (USPN 6565452) further in view of O'Doherty (USPN 6383090).

Regarding claims 3 and 16, Satoh et al. in view of Anderson et al. and Helmstetter et al., and moreso in particular Anderson et al., does not disclose the face plate made of maraging steel. O'Doherty discloses maraging steel being desirable as a plate-like face body in order to avoid impact absorption (See Brief Description of the Invention). One having ordinary skill in the art would have found it obvious to use

maraging steel as a plate-like face body, as taught by O'Doherty et al., in order to avoid impact absorption.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. (USPN 6179726) in view of Anderson et al. (USPN 5255918) and Helmstetter et al. (USPN 6565452) further in view of O'Doherty et al. (USPN 6383090) as shown above, in view of Campau (USPN 4398965).

Regarding claim 9, Satoh et al., Anderson et al., Helmstetter et al., and O'Doherty et al. discloses the plate-like face body made of maraging steel and the head body made of a stainless steel, but does not disclose the type of stainless steel. Campau disclose an iron golf club head a head body made of 17-4 stainless steel (See Columns 3 and 4). Campau also notes that the material is common used within the art for casting irons. One having ordinary skill in the art would have found it obvious to have the head body made of 17-4 stainless steel, as taught by Campau, because of its availability within the art. It is also submitted that 17-4 stainless steel inherently contains 17% chromium, 4% nickel, 4% copper, and 1 % niobium.

Regarding claim 10, Anderson et al. inherently discloses the thickness of the portion of the heel part being at least 0.2mm larger than that of the plate-like face body being that a tolerance would exist to allow for the welding of the plate-like body to the head body.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich, can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AAH

Alvin A. Hunter, Jr.



EUGENE KIM
PRIMARY EXAMINER